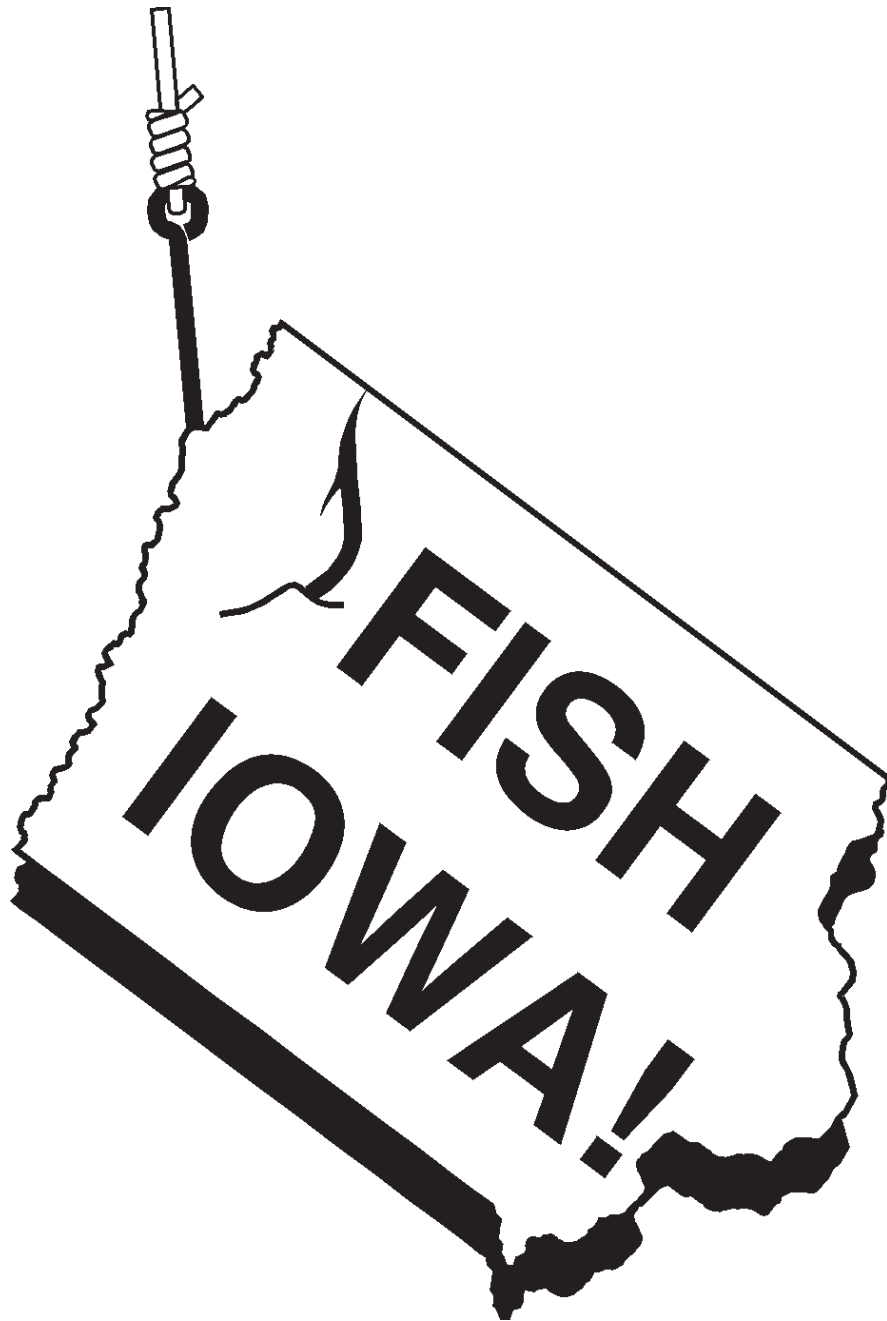


An Introduction to Ice Fishing



Aquatic Education Program
Iowa Department of Natural Resources
Des Moines, Iowa

2007



This information is available in alternative formats by contacting the DNR at 515/281-5145 (TTY users - contact Relay Iowa, 800/735-2942) or by writing the DNR at 502 East 9th Street, Des Moines, IA 50319-0034.

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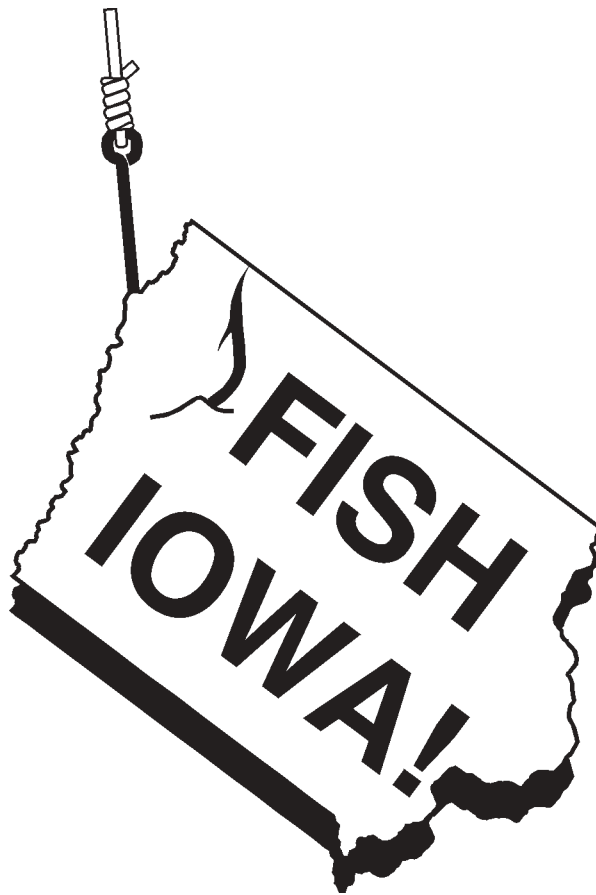
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Fish Iowa! A Teaching Module

Fish Iowa! is a basic spincasting module designed for use in physical education classes or with youth groups. The module is provided to educators and youth leaders, free-of-charge, through mentor sessions and workshops. For more information, or to set up a training session, contact the aquatic education coordinator at 641/747-2200, or write to: *Fish Iowa!*, Iowa Department of Natural Resources, 2473 160th Road, Guthrie Center, IA 50115. For more information or questions you can also email: AquaticEd_Info@dnr.iowa.gov or visit our website: www.iowadnr.gov/education/tchrmatt.html.



An Introduction to Ice Fishing

Introduction

This unit is designed to introduce the angler to the winter sport of ice fishing. Preparation, ice safety, equipment, and angling strategies for an ice fishing trip to a frozen Iowa pond or lake are discussed. *Fish Iowa! An Introduction to Ice Fishing* was designed to be used in conjunction with *Fish Iowa! A Teaching Module*. See page one for more information about that module.

Objectives

- ☒ Students will choose the appropriate clothing and gear for an ice fishing outing.
- ☒ Students will demonstrate safety precautions necessary for ice fishing.
- ☒ Students will demonstrate ice fishing strategies.
- ☒ Students will participate in an ice fishing experience.

Materials

Brochures/handouts:

Iowa Fishing Regulations

Fish Iowa! An Introductory Guide to the Fish of Iowa

Optional: Length limit rulers, *North Central Hunter Education Manual*, *Iowa Boating Basics*

Audiovisual

Ice Fishing (10:00)

Other:

assorted winter clothing for layering activity

chalkboard or easel and markers

five gallon bucket with ice water, thermometer, and coins

ice fishing gear

Time

1-2 50 minute class periods or longer if an outdoor experience is included

Narrative

Getting Ready

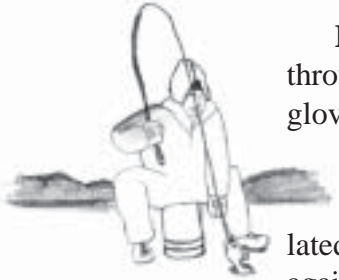
Clothing

When planning an ice fishing trip, clothing may be more important than all of your other gear. Winter weather in Iowa can change quickly from sunny and pleasant to windy and snowing. The best choice for winter clothing is **layering**; a T-shirt, turtleneck, or long underwear shirt; a sweater; and then a coat. Coveralls tend to be warmer than a coat and insulated pants, eliminating the space that cold air can get through! *The outermost layer should be windproof.* Polypropylene or similar materials are best next to the skin. They wick perspiration away from the skin's surface and keep warm air trapped there. Wool is a unique material that retains its insulating ability even when wet, making it a material of choice for ice fishing socks. With three to four layers of clothing you can add or subtract layers and be comfortable the whole day, no matter what the weather does. An extra set of dry clothes is needed in case you get wet and for emergencies.



clothing

Hats and gloves are essential. Seventy-five percent of a body's heat loss is through the head. With a hat in place, you will stay much warmer. Spare hats and gloves are a must in case gloves get wet or hats are misplaced.

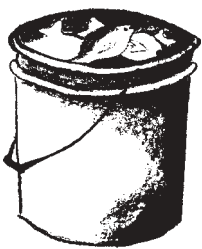


Ice fishing involves close contact between feet and the ice. When standing, or even sitting in a chair, your feet will be on the ice. Wear warm **socks** and insulated **boots** and bring a piece of carpeting or cardboard to stand on. This will guard against frost-bitten toes. Boots should be waterproof to keep feet protected from the inevitable slush and water.

Equipment

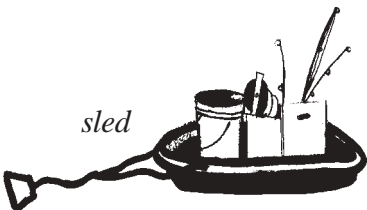
Another very important part of the gear is a **first aid kit**. A basic kit is described in the *Fish Iowa!* manual at the end of *Unit #1: Introduction to Fishing*. These kits can be packed compactly and will fit in a tackle box or a fanny pack. Being able to quickly and effectively tend to minor mishaps can mean the difference between staying on the ice or quitting for the day. **High energy snacks** and a thermos of **hot liquids** (cocoa, sweetened tea, hot fruit juices, or hot soup – nothing containing alcohol) should be included to keep you going on a cold day (these things may even prevent hypothermia). Small, pocket-size, **hand warmers** can be purchased that, when activated, will give off heat for several hours – just like the old-fashioned hot rock or hot potato hand warmers!

bucket



Ice fishing requires very little equipment and it can be obtained relatively inexpensively, depending on how complicated you want to be outfitted. A **five-gallon bucket** works nicely to carry gear, turned upside-down it makes a seat, and it will work to haul the catch. A **sled** can be used to transport gear, especially if you need to walk very far to get to the best spot.

sled



An **ice auger** is used to drill a hole in the ice. It can be hand or gas powered. When selecting a hand auger stick to a smaller size (four to six inch blade) and keep the blades sharp. It is much easier to drill a small hole with sharp blades. Carry a hone or blade sharpener, in case you need to drill several holes. A solid steel **spud bar** also can be used to make a hole. This hole should be an inverted funnel shape with smooth sides so as not to catch and break the fishing line. Attach a rope to the spud bar to wrap around your wrist to make sure you don't lose it down the hole as you first break through the ice. Do not make holes larger than twelve inches, these could be dangerous to other people walking in the area. An ice **skimmer** (strainer-type instrument) is used to clear the hole of ice chips, allowing you to get your bait or lure down the hole and keeping the hole from quickly freezing back over.

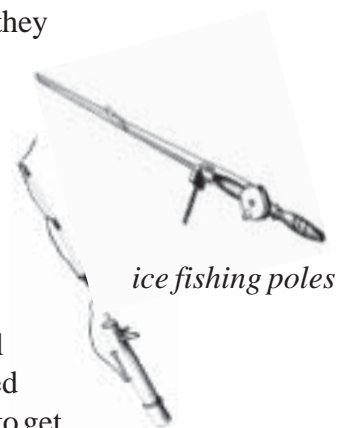


ice auger



skimmer

Ice fishing **poles** can be simple homemade items or “store-bought” rigs. Some anglers like to use a simple rod or stick with line-winding pegs on the handle so they can hand-hold their lines. The advantage of a rod with a reel is that it will allow you to “play” a fish better and you can change fishing depth with the twist of a finger. Use line that's six pound test or less. Two to four-pound test transparent monofilament seems to be the choice of most ice anglers. The heavier test line loses its limpness in the cold, making it difficult to get any tension on the line. Just a reminder, as with summer angling, only two poles per licensed angler may be in action at the same time.



ice fishing poles

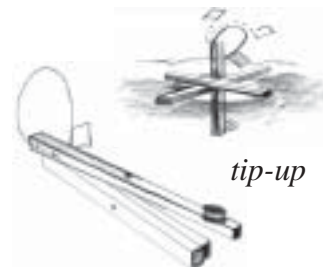
A small dime-sized **bobber** or a spring-tipped fishing rod is needed to signal when a fish is taking the hook. Bobbers made from foam or sponge are preferred because they do not freeze easily. You can curl part of the line around a finger to get the message when you have a bite, if you don't use a bobber. This technique requires you to sit still near the hole and wait. A tip-up device also can be used. With a **tip-up**, a flag is triggered to spring up when a fish bites. This device does not require as close attention as a rod and usually is used when fishing for larger fish.



bobber

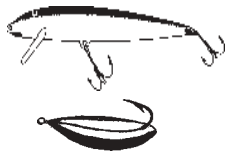
Lures used in ice fishing include spoons, Swedish pimples, or teardrops. Sinkers usually are not needed with these types of lures. Ice fishing lures are designed to be fished vertically (up and down). Most lure action will be as the lure is brought up, then allowed to settle in a yo-yo or jigging motion. These lures are usually brightly colored to attract the fish's attention, even in low light conditions.

Use small **hooks** (#8 - #10) with a bead to attract attention to the bait. A variety of **bait** is available; the choice depends on the kinds of fish sought. See *Unit #2: Fish Senses and Characteristics of the Fish Iowa!* manual for descriptions of Iowa's fish species and their feeding preferences.



tip-up

lures



Some examples, which usually can be purchased where bait is sold, include: minnows (generally less than two inches long), waxworms, mealworms, or Arkansas wigglers. Winter-time baits also can be collected. Goldenrod borer larvae can be obtained from galls (swellings) of dried goldenrod stems or corn borer larvae may be in some remaining corn stalks in a field. Both are suitable ice fishing bait. Earthworms, if they can be collected, also make excellent bait.

When using minnows, you will need an **insulated minnow bucket** (to keep bait from freezing) and a **minnow dipper** (to keep hands from getting wet and freezing). A **sinker** (try to purchase the nonlead variety to keep this toxic metal out of the environment) may be needed to get the right presentation. The bait may not be heavy enough to sink to the desired depth or active minnows sometimes swim to the surface if not weighted down with a sinker. Use the smallest amount of weight possible as a heavy set up may prevent a slow moving winter fish from taking the bait.

Miscellaneous

A camping **lantern** or powerful, reliable **flashlight** is a must if there is any chance of being on the ice after dark. It is also a good idea to include a **needle-nose pliers** and a **knife** for removing hooks and cutting line. A **tape measure** or **length limit ruler** is needed to measure fish which have length limits. *Fish Iowa! - an Introductory Guide to the Fish of Iowa* and the most current copy of the *Iowa Fishing Regulations* also may come in handy.



*group ice shelter
(See page 22 for ice
shelter building plans.)*

A wide variety of ice **shelters** have been designed for ice fishing. These range from the ones with a kitchen area and sleeping accommodations to a three-sided, one-person, canvas wind-break. The average ice shelter is built to be portable, usually a combination of wood and canvas. Many have runners for ease of movement from one fishing spot to another. The more elaborate shelters have floors, others are floorless or have a half floor for plenty of room to drill holes in the ice. If you decide to use a shelter, make sure to review the rules and regulations concerning ice shelters covered later in this unit. Shelters can turn a cold, windy, winter's day into an enjoyable time fishing! (A design for a portable ice shelter that can be used with a group is included in this unit.)

Safety

Ice fishing can put an angler in some dangerous situations. Icy cold waters and bone-chilling air are unforgiving elements. Unsafe behavior can have deadly results. Before going out on the ice, be prepared with safety equipment and know ice safety precautions. In early winter, it usually takes a week or more of below freezing temperatures to form safe ice.

Ice Thickness and Quality

The best time of the winter to fish is just after lakes and ponds freeze over and safe ice forms (early winter) and just before thaw (late winter). These are also times when the ice is the least reliable. Take the time to check (and double check) the ice

on which you are planning to fish and take all safety precautions.

Before venturing out on the ice, drill a hole in it from a dock or the shore to gauge the thickness and quality. Four inches of clear blue ice or eight inches of black, honey-combed ice will safely hold an adult-sized person. Five to six inches of clear blue ice is needed for snowmobiles, four-wheelers, or groups of three or more people.

Avoid ice that appears dark, this is “rotten ice” and can be unstable. Avoid danger spots where the ice may be weakened or thinner. Snow covered areas are insulated by the snow and the ice underneath may be weakened. Immersed objects sticking out of the water gather heat from the sun. This can melt the ice surrounding the object. Areas used frequently by ice anglers can be full of old auger holes – use extra care in these spots. The water movement from springs or where a stream enters a lake can cause non-uniform ice thickness. In rivers, currents near the river bank and sunny cliff bases can produce areas of thin ice. Know the area you will be fishing and avoid locations where ice thickness may be unpredictable. Large lakes can be especially dangerous because wind and wave action can break up very thick ice in a very short time.

Ice Depth	Safe For:
4 inches	One adult
5-6 inches	Snowmobiles, ATVs, groups of 3-4 people

Fishing Partners

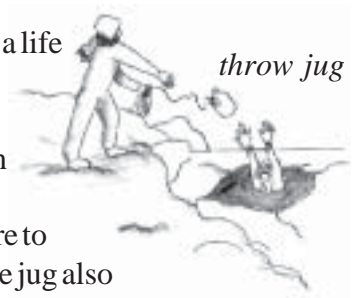
As with most activities involving water, it is a good idea to use the “buddy” system. Take someone along when ice fishing! Always let someone else know where you will be and when you expect to arrive back. This way someone will be able to find you in the shortest amount of time if you do not show up on schedule.



fishing buddies

Safety Equipment

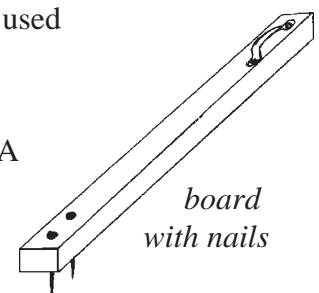
A five gallon bucket used to carry gear to the fishing spot also can be a life saver. The five gallon bucket can be inverted, holding air, and allowing a person to float on it until help can arrive. It is also a good idea to take a **throw jug** ice fishing. This is simply a plastic jug with a lid and some nylon rope. The rope is stored inside the jug until needed. It then can be tied to the milk jug handle and the lid replaced. The jug can be thrown from shore to someone who has fallen through the ice so she can be pulled to shore. The jug also can keep someone afloat until help arrives. (See *Appendix B: Homemeade Equipment* in the *Fish Iowa!* manual for construction instructions.)



throw jug

All ice anglers should carry a simple piece of equipment that could be a lifesaver. A **small board with a nail or spike** attached perpendicularly to one end can be used to help you get a grip on the ice and pull yourself out if you go through the ice.

Include a **personal flotation device (PFD)** in the gear you take ice fishing. Even with the best of planning and safety checks, accidents occur. Be prepared. A PFD can keep you afloat until help arrives.



board with nails

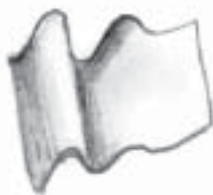
A **piece of rope** (at least fifty feet in length) can be tied to a PFD and thrown to someone in trouble. A rope also can be tied to an anchor on shore (e.g., a tree) and then around your waist for extra safety when fishing alone.

An angler alone who falls through the ice, must try to get herself out. Two minutes in cold water is long enough to make hands too stiff to use. On average, a person can survive in cold water only twenty to thirty minutes before hypothermia overcomes him. Grasp the edge of the ice in the direction of shore or safe ice and, if it breaks, keep going until you find solid ice. Use your legs to get your torso out on the ice. Roll to safety. Don't try to get up to walk, you may break through the ice again. Rolling spreads your body weight out over a larger area and will put less pressure on the ice.

If you are unable to get out of the water, you must conserve body heat. Try to remain as still as possible and tuck into a ball shape to conserve heat until help arrives.

Hypothermia and Frostbite

Frostbite is localized freezing of tissue. The extremities (nose, ears, fingers, and toes) are most susceptible. In the early stages of frostbite, the skin around the affected area will look flushed and you will feel burning, itching, tingling, or numbness in the area. A frostbitten area will turn whitish to yellowish and appear waxy as ice crystals form under the skin. Do not rub a frostbitten area to warm it. The ice crystals in the tissue can cause further damage, if rubbed or moved around. Do not warm the area by a fire. The area will be numb and you may not realize you're being burned. The best way to slowly warm a frostbitten area is to place it near warm skin. For cold hands, the armpits or abdomen are usually the warmest areas where they can be placed. A warm hand works best for ears and nose. Once frostbitten, that area will be more susceptible to refreezing.



Bring along a blanket or sleeping bag to help someone warm up.

Hypothermia is the actual lowering of the body's temperature—the body loses heat faster than it can be generated—and can be very serious. Extremely cold temperatures are not necessary to induce hypothermia. Dampness and wind, with mild temperatures (40 to 50 °F) can bring it on. Shivering is the first sign of hypothermia. As it progresses, the victim may develop coordination problems, blurred vision, nausea, and slurred speech and may lose the ability to think clearly, to reason, or to remember. Get a hypothermia victim dry and warm as fast as possible. A warm shelter out of the wind and warm, dry, insulated clothes and covers are a first step. Give him hot liquids (Cocoa or tea - **not alcohol**, which causes dilation of the blood vessels and further cooling). If the person is unconscious, shivering uncontrollably, drowsy, or having difficulty breathing, keep her as warm as possible and get immediate medical attention.

Angling Strategies

The actual process of ice fishing is simple; suspend the right bait or lure at the right depth in the right place at the right time and wait until a fish bites. The hard part comes in determining the right bait or lure to use at which depth and where and when the fish will bite. Several holes may be needed and several lures tested in order to find the fish! One advantage to ice fishing is having access to the entire lake or pond without needing to use a boat.

Rules and Regulations

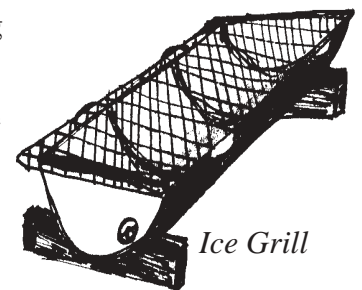
Ice fishing falls under all fishing rules and regulations. Get a current copy of the *Iowa Fishing Regulations* at your local County Recorder's office or any license outlet. This publication also lists contacts for regional fisheries biologists and IDNR law enforcement personnel for each county. These people can answer questions about regulations or ice fishing hot spots.

Ice fishing shelters have some special requirements. If they are going to be left unattended, they must have the owner's name, street address, and city in four-inch or larger block letters (in a color contrasting to their background) on all sides. Reflectors must be attached to all sides on any shelter left on the ice after sundown. Structures must not be locked while in use. They must be removed from all state-owned lands and waters by February 20th or ice melt, whichever comes first.

General Ice Angling Hints

Finding a school of catchable fish is the first step in ice fishing. To facilitate this an electronic fish finder and/or depth finder can be used above the ice. A less technical approach is for a group of anglers to split up and go to different locations to look for the fish. Place poles in separate holes, but still in view and at different depths (e.g., just off the bottom, one foot off the bottom, and work upward until your depth is half way between the bottom and the ice). Determine the depth by sending a heavy sinker (**depth finder**) to the bottom and then tying a colored marker to the line just above the reel or place a bobber on the line at the water's surface. Use different set-ups on each pole (e.g., one pole with a lure, one with live bait, etc.). These strategies can help you quickly find where the fish are and what they're biting on. Of course, other anglers on the lake already may have found fish. Ask their permission before setting up nearby.

Using an ice shelter can give you the advantage of actually being able to see the fish. If the ice shelter can be made dark, you can take your lure or bait to the fish and dangle it in front of their noses. Adding a white substrate below the hole (e.g., ground clam shells) can facilitate underwater visibility. This technique is used mainly when spearing fish through the ice, but could provide some interesting underwater viewing for a group of beginning anglers. A shelter provides a place to fish out of the wind and weather and can be used to periodically warm up anglers fishing out on the ice. Some groups have borrowed large tents from their local Army National Guard, built ice grills to cook their catch right on the spot, and turned the ice fishing excursion into quite an event.



(See page 22
for diagram.)

Note: Leave the area you fish cleaner than when you started fishing. Discarded fishing line, bait containers, or tackle are an eyesore and can be hazardous to wildlife and to people!

Time of Day

Fish are more active at certain times of day. Knowing when they're likely to be active can help you predict the best time to fish successfully. Generally, the two most active periods of a fish's day are from dawn until mid-morning and late afternoon until sundown. This may vary with each species and with different localities. If at all possible, tailor your fishing time to match a known feeding time to greatly increase your likelihood of success. Local bait dealers and other anglers can often tell you more specifically when certain fish are active throughout the winter in your area.

Choosing a Good Spot and the Right Equipment

Review *Fish Iowa! Units #1 and #2* about Iowa's water resources and fish species' habitat preferences and requirements. The most commonly sought Iowa fish in winter include: bluegill, crappie, perch, walleye, Northern pike, and largemouth bass. Fish behave differently in the winter, so summer fishing tactics may not work. Many fish school or form groups in the winter and often retreat to the deeper parts of the lake or pond, where the water is warmest. Sometimes fish of the same age class stick together. This means, if you are catching small fish, you may need to change depth or location to find a school of larger or older age class fish.

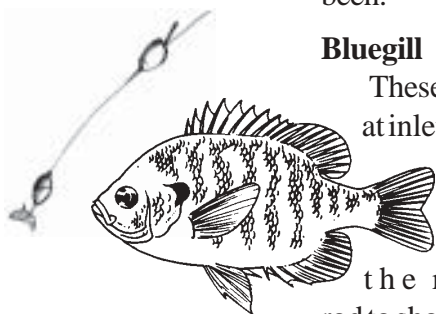
Each species of fish requires a different strategy. The following tactics are for the main types of habitats and species fished in Iowa.

Farm Ponds

Most Iowa farm ponds are stocked with bluegill, largemouth bass, and channel catfish. Some of the larger ponds (over two acres) also may have crappie. Always remember to ask permission to fish on privately owned waters. While asking permission, you also can ask what species were stocked in the pond and how the fishing has been.

Bluegill

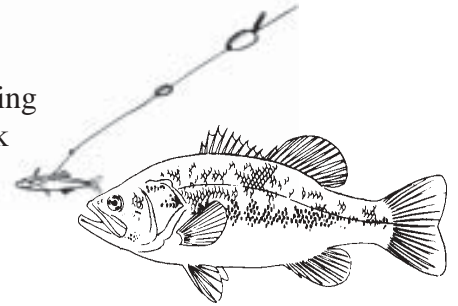
These fish usually haunt deeper waters in winter than in summer; the weedy areas at inlets and outlets or where there is some underwater structure (logs, brush piles, or artificially placed habitat) usually in the deeper part of the lake or pond (at ten to twenty feet). Start with your bait or lure at or near the bottom, move up in one or two foot increments until you find fish. Jig the line (raise the rod up with your wrist every minute or so and every few minutes raise the rod to shoulder level and let the bait or lure settle). If fish don't bite in thirty minutes or so, drill another hole in a different location and try the same strategy again. A good combination to attract bluegill would include a small (1/64 oz. with a #10 or #12 hook) ice jig or teardrop with some type of insect larvae (grub) attached. Use bright



colored lures and a small, foam rubber bobber. Four to six pound test line is a good strength for this fish. Bluegills tend to feed during daylight hours.

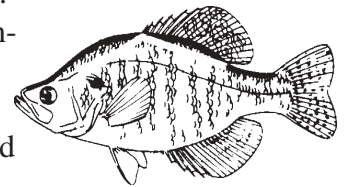
Largemouth Bass

The set up for this bass includes a jig or a plain hook with a minnow using four to six pound test line. The minnow should be hooked through the back to allow for the most movement. Start fishing in the deepest part of the pond. This is usually located 30 feet or so in from the dam. Bass will frequent the same type of habitat as bluegill. Jig the minnow slowly. It will provide some motion on its own.



Crappie

These fish tend to feed after dark. Crappie can be readily caught during daylight hours, but fishing at night can be great fun! They usually are located in deeper water during mid-day and seem to move toward shore in the early morning and evening. Use a two to four pound leader with a #8 or #10 hook and a one to two inch minnow. A 1/16 oz. jig can be used with a grub. Remember the small bobber. With the jig set up you will need to provide the action by jiggling as you would for bluegill. The minnow can be left alone. Crappie also can be found in the coves and upper reaches of large flood-control reservoirs.

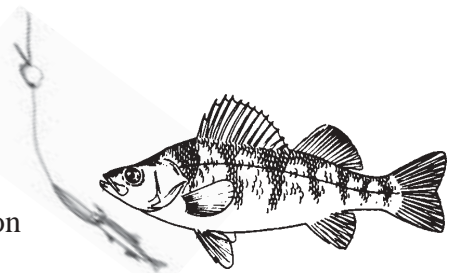


Natural Lakes and Constructed Larger Lakes (20 plus acres)

These areas will hold the same species as a farm pond with some added challenges and larger species.

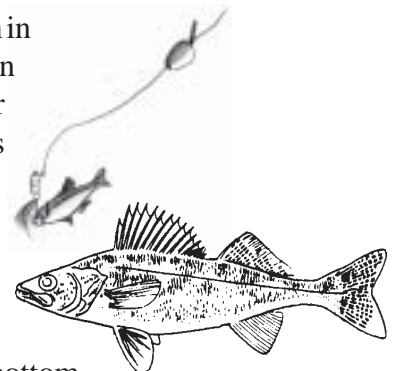
Yellow Perch

Perch move in schools and frequent areas similar to those used by bluegill, so start near the bottom and move until you find fish. The same type of leader and hooks can be used as with crappie. Perch are attracted by spoons baited with minnows or a plain hook or teardrop baited with a grub. It is important to keep a spoon in motion – use a steady jiggling motion with this lure.

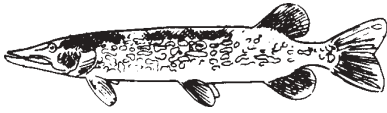


Walleye

These fish typically are found over a rocky substrate and just off the bottom in waters eight to thirty feet deep. They tend to feed at dusk or on cloudy days. On bigger lakes, it is helpful to check areas that are being fished – where shelters or aggregations of holes are located – to gain knowledge from experienced anglers about locating these big-water fish. You may want to use a heavier line for walleye (six to eight pound test or even heavier depending on experience) and include a six to eight pound leader. An 1/8 oz. or 1/4 oz. jig and a minnow or a minnow on a plain hook (size #2 to #6) are good set ups to try for walleye. Swedish pimples or spoons are also good options. These are bottom dwelling fish, so bounce the lure off the bottom for action. Keep the lure as close to the bottom as possible (six to eight inches up at most). Another location that has proven to be good for catching walleye is in the open water just below dams on constructed lakes.



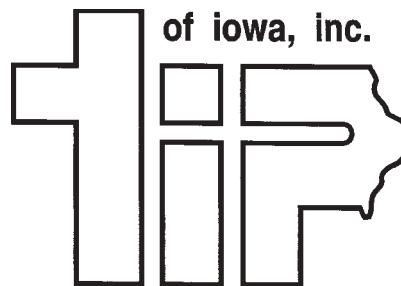
Northern Pike



These fish prefer drop-offs and hang in or near weedbeds and brushy shelter in water three to twelve feet deep. Use up to twenty pound test line with a wire leader (They have sharp teeth!). Fish one to four feet off the bottom using a plain spoon or minnow-like lure. These types of lures require jigging. Larger bait is used for pike. Four to five-inch minnows or chubs can be used on #1 or #2 treble hooks. A tip up can be used with the minnow or chub providing the motion. Make sure to use a pliers to remove the hook from the fish's mouth – remember the teeth!

Hot Spots

Remember when planning an ice fishing experience to check with local anglers and resource personnel to locate the best spot to fish. Visit the IDNR fisheries web page (www.iowadnr.com/fish/index.html) for fishing reports and information about Iowa lakes and ponds. Your local County Conservation Board personnel and local IDNR Conservation Officer are good sources for finding out where the fish have been biting in your area.



1-800-532-2020

If you see someone violating state or federal fish and game laws, you can anonymously report the activity to TIP. The TIP call will be given to a local IDNR Conservation Officer for investigation.

Approach

Depending on the age and experience level of your group, show the video, *Ice Fishing*, to provide a good overview of ice fishing in Iowa. This program is for sixth grade or older students.

For younger students, set up a relay race to demonstrate layering clothing for a trip to the ice. Make a pile of clothing to form the appropriate layers for an ice fishing outing for each relay team. Each pile should have an equal number of pieces. Divide the students into teams of eight to ten (depending on the number of pieces in each pile). Each team will pick one person to stay at the starting point and put on the items as they are brought, relay-style, by the rest of the team. The team who dresses their person first wins the relay. At that point, the functions of each layer can be discussed as the dressed person sheds the layers.

Use the *Cold Hand Luke* activity to demonstrate how quickly cold water can make a person unable to function. Do the activity first for impact and then discuss hypothermia. Additional information about hypothermia can be found in the *Fish Iowa!* manual, *Unit #1*, the *North Central Hunter Education Manual*, and *Iowa Boating Basics*. (See list of *Resources*.)

Discuss safety precautions used when venturing out on the ice. Brainstorm ways to rescue someone who has fallen through the ice. Discuss types of safety equipment that should be included in the gear taken on an ice fishing trip.

Discuss the reasons for different fish behavior in winter versus summer. To help with this discussion, use the *Project WILD Aquatic* activities *Fishy Who's Who* and *Hooks and Ladders*. These activities can be adapted to emphasize fishes' winter time habits. In *Fishy Who's Who* the students write biographies on the different fish species found in their area. Make sure their biographies include habitat and behaviors in winter as well as summer. The *Hooks and Ladders* activity is a physical simulation of the life cycle of Pacific salmon. Instead of the salmon, have the students choose a local fish species and investigate what habitat it needs for egg laying, what types of predators the hatchlings need to avoid, whether or not it schools in the winter, and what are its winter habitat needs, as well as other aspects of its life cycle. Using this information, adapt the *Hooks and Ladders* game to reflect the life cycle of a local fish species.

In preparation for an ice fishing field trip, discuss the basic equipment needed as described in the narrative. Using the *Ice Fishing Trip Checklist* at the end of this unit, have the students describe how each piece of equipment listed might be used while on the ice. Invite a local ice angler to speak to your class and demonstrate the different bait, lures, and set ups used for different species when fishing through the ice.

Review fishing rules and regulations using the most current copy of the *Iowa Fishing Regulations*. Develop a scavenger hunt list of questions to motivate students to learn how to look up the answers in the pamphlet. Review ice safety concepts discussed earlier.

Using *Appendix L: Tips For Conducting A Fishing Field Trip* from the *Fish Iowa!* manual, organize an ice fishing field trip. Iowa residents who are 16 years of age or older are required, by law, to possess a valid fishing license if they are fishing.

Skills Test

While on the ice, conduct skills tests by having the students demonstrate the safe use of an auger or spud bar, demonstrate the proper set up of bait or lure for the selected species being fished, demonstrate jigging, or demonstrate a mock ice rescue. Enjoy, conserve, and respect Iowa's fishery resources.

Cold Hand Luke

Cold water can cause you to lose feeling in your limbs, interfere with your ability to move or think, and even cause death in some cases. This is a demonstration of some of the effects of cold water, even over a short period of time.

Water conducts heat away from the body twenty-five times faster than air and a victim could die in as few as 60 minutes in water colder than 40 °F. In 50 °F water, you have a 50-50 chance of swimming beyond 50 minutes without a protective PFD.

To emphasize this, fill a five-gallon bucket with ice water. Put some change in the bottom (pennies work fine) and invite volunteers to get the change back out. They can keep all the change they pick up, if they can keep their hand in the water for three minutes. If they can't keep their hand in the water for three minutes, they can't keep the change.

Point out the decreased dexterity, white skin, lack of sensitivity, and weak pulse of the exposed limb caused by only a few minutes in cold water.

Caution: You may want to use an adult volunteer if you are working with younger students.

Resources

Aquatic Education Program

Iowa Department of Natural Resources

2473 160th Road

Guthrie Center, IA 50115-8518

Phone/fax: 641/747-2200

AquaticEd_Info@dnr.iowa.gov

Fish Iowa! A Teaching Module – printed 2003, basic spincasting teaching module available through training session

Fish Iowa! - An Introductory Guide to the Fish of Iowa – printed 1997, pamphlet describing about 30 Iowa fish species

Iowa Fishing Regulations – updated annually, summary of current fishing regulations

Ice Fishing – 1/2 inch VHS, 10-minute program provides overview of ice fishing

Length limit ruler – printed annually, 16-inch sticker type ruler

Project WILD Aquatic – activity manual, contains 40 activities dealing with aquatic resources, wildlife, and issues, distributed through workshops

Recreational Safety Programs

Iowa Department of Natural Resources

502 East 9th Street

Des Moines, IA 50319

Phone: 515/281-8652 Fax: 515/281-6794

Iowa Boating Basics: A Guide to Responsible Boating – printed 1997; self-guided safe boating course

North Central Hunter Education Manual – printed 1999, manual provided thorough hunter education courses

Other Useful References

Mayhew, J. (ed.). 1987. Iowa Fish and Fishing. Iowa Department of Natural Resources: Des Moines.

Howard, R.A. Jr and H.D. Greene. 1985. Let's Go Ice Fishing. Cornell Cooperative Extension: Ithaca. For a catalog of Extension publications write: Distribution Center, 7 Research Park, Cornell University, Ithaca, NY 14850.

State of Michigan - Department of Natural Resources. 1983. Michigan Ice Fishing Handbook. (R-1052-10). Order from: Fisheries Division, Box 30028, Lansing, MI 48909.

Depth maps are available for most constructed lakes managed by the IDNR. Contact: IDNR, Wallace State Office Building, 502 E 9th Street, Des Moines, IA 50319-0034 for availability. Several maps also are available on the Fisheries Bureau web site, www.iowadnr.com (click on "Fish and Fishing").

Ice Fishing Trip Checklist

Layered Clothing

- ☐ T-shirt, turtleneck, or long underwear shirt
- ☐ sweater or sweatshirt
- ☐ coat with waterproof/windproof shell
- ☐ coveralls
- ☐ lightweight socks
- ☐ wool socks
- ☐ gloves or mittens
- ☐ spare pair of gloves or mittens
- ☐ hat
- ☐ spare hat
- ☐ waterproof gloves
- ☐ insulated/waterproof boots
- ☐ mat to stand on
- ☐ change of clothes - just in case

Safety Gear

- ☐ basic first aid kit
- ☐ high energy snacks
- ☐ hot, nonalcoholic liquids
- ☐ 50 foot (or more) rope
- ☐ personal floatation device (PFD)
- ☐ small board with nail or spike
- ☐ throw jug

Fishing Equipment

- ☐ ice auger or spud bar
- ☐ five gallon bucket
- ☐ sled
- ☐ ice skimmer
- ☐ poles and/or tip ups
- ☐ monofilament line (#test varies with species of fish you're after)
- ☐ small bobbers
- ☐ hooks (size varies with species of fish you're after)
- ☐ leaders
- ☐ small, nonlead sinkers
- ☐ lures
- ☐ bait (grubs, minnows, earthworms, chubs)
- ☐ insulated minnow bucket and dipper
- ☐ lantern or flashlight
- ☐ needle-nosed pliers
- ☐ knife or scissors
- ☐ tape measure or length limit ruler
- ☐ ice shelter (optional)

An Introduction to Ice Fishing Review Sheet 1



The words listed below can be found forward, backward, and diagonally in the word search.
 No hyphens or extra spaces are in the puzzle.

layering

hats

gloves

socks

boots

sled

auger

skimmer

poles

tip-up

bobber

lures

bait

hooks

sinker

minnow dipper

shelters

lantern

needle-nose pliers

throw jug

PFD

frostbite

hypothermia

bluegill

ice fishing

largemouth bass

crappie

perch

walleye

Northern pike

five gallon bucket

safety equipment

leaders

An Introduction to Ice Fishing Review Sheet 2

1. List the layers of clothing recommended for an ice fishing outing.

2. List three pieces of safety equipment carried when ice fishing and how each would be used.

3. Define frostbite.

4. True or False. Frostbite is treated by rubbing the affected area until warm.

5. Define hypothermia.

6. List three symptoms of hypothermia.

7. True or False. A warm cup of brandy is the best treatment for hypothermia.

8. List three types of areas where ice may be of an unpredictable or nonuniform thickness.

9. True or False. One to two inches of clear blue ice is enough to safely hold a group of people ice fishing.

10. How is ice thickness checked for safety before venturing out on it?

11. True or False. Always take someone with you when going ice fishing.

An Introduction to Ice Fishing Review Sheet 3

1. Describe one strategy for finding a feeding school of fish under the ice.
2. What two times of the day are fish most active?
3. Circle all of the species of fish from the list below which can be found in most Iowa farm ponds.

Northern pike largemouth bass bluegill channel catfish crappie

4. Where is the deepest water found in a farm pond?
 - a. as far from the dam as possible
 - b. at the inlet
 - c. about 30 feet from the dam in toward the pond at the center
 - d. where cattails are growing

5. Circle all of the bait items listed below that would be appropriate for use in ice fishing.
corn borer larvae minnows earthworms stink bait waxworms meal worms

6. Bobbers used for ice fishing should be small and made of _____.
 - a. plastic
 - b. wood
 - c. foam or sponge
 - d. metal

7. Describe how to jig a lure.

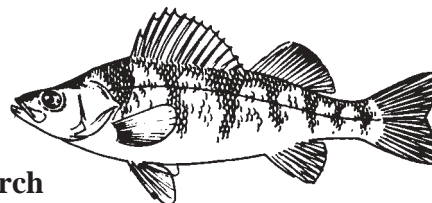
8. Describe the underwater habitat used by bluegill in winter.

9. List three ways an ice shelter can be helpful.

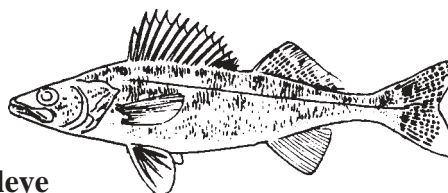
10. What line strength is best for fishing largemouth bass through the ice?
 - a. fifteen to twenty pound test with a wire leader
 - b. ten pound test with a two to four pound test leader
 - c. two to four pound test
 - d. four to six pound test

An Introduction to Ice Fishing Review Sheet 4

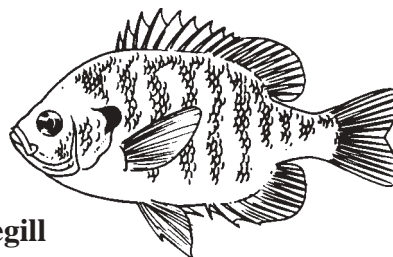
Draw lines to match the set up to the species of fish it's meant to catch!



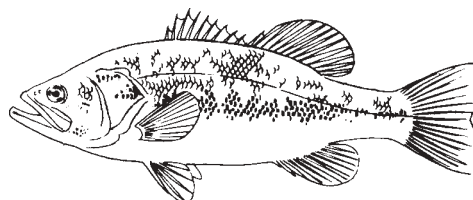
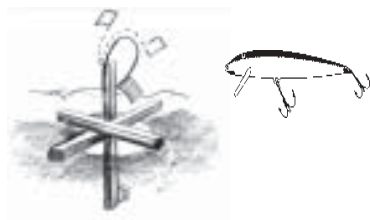
perch



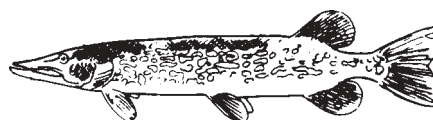
walleye



bluegill

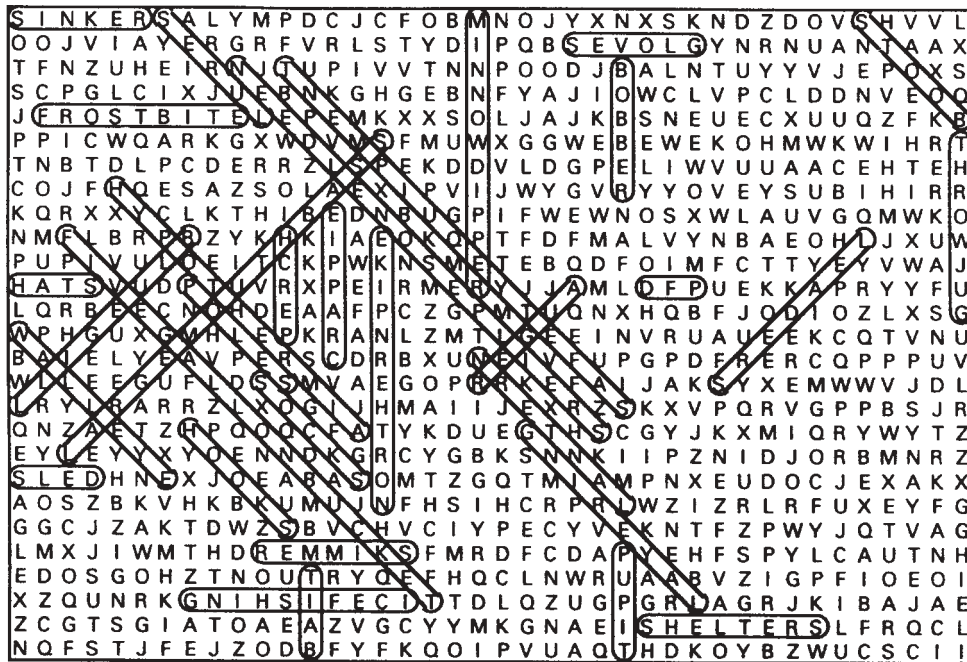


largemouth bass

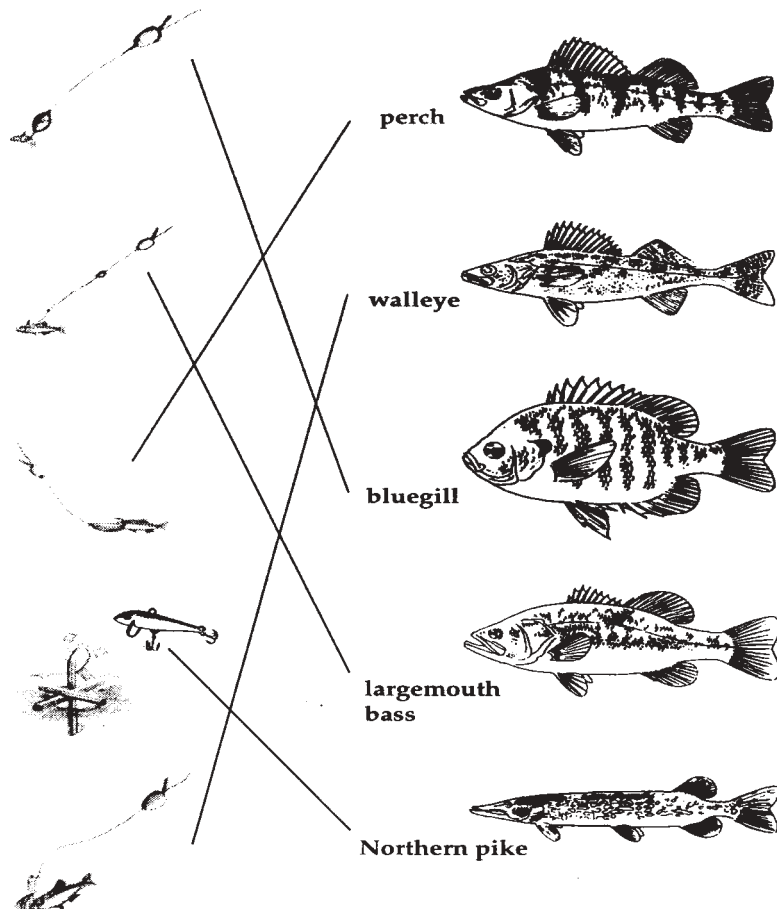


Northern pike

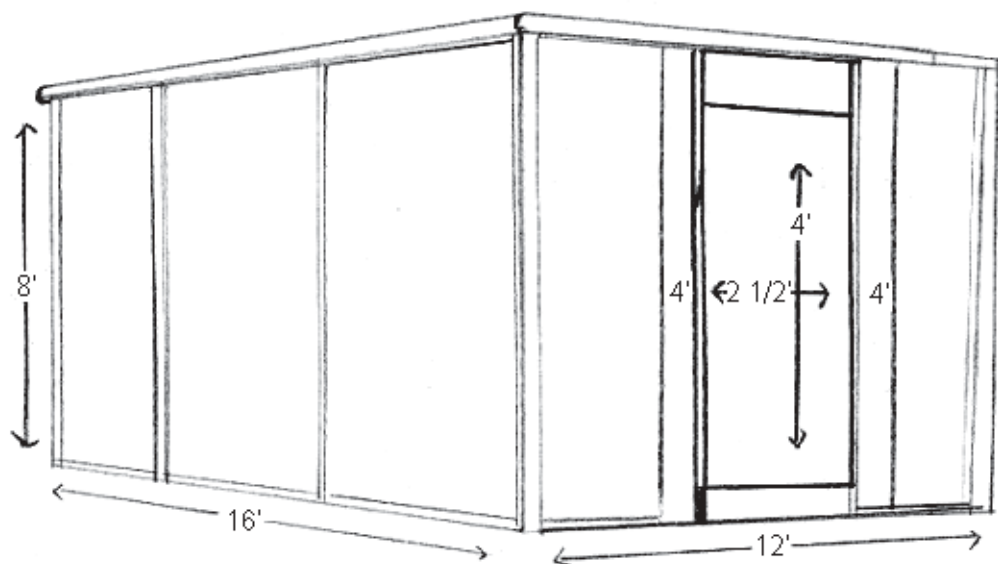
Answers to Review Sheet 1



Answers to Review Sheet 4



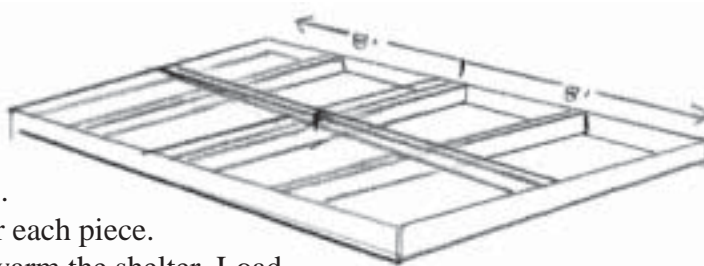
Ice Fishing Shelter Plans



Dimensions

8' H x 16' W x 12' D

(Note: To reduce weight, make the shelter only 6' high.)

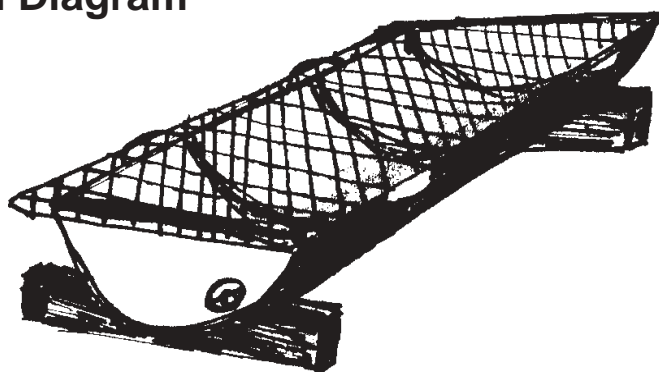


Build the framework for each wall (four pieces) and the roof (two pieces).

Stretch heavy gauge, clear plastic over each piece.

The clear plastic allows the sun in to warm the shelter. Load the six pieces on a trailer for transport. At the fishing spot, set up the shelter with three people, two step ladders, hammers, and large spikes.

Ice Grill Diagram



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